

REMARKS

The Examiner's Office Action of April 20, 2004 has been received and its contents reviewed. Applicants would like to thank the Examiner for the consideration given to the above-identified application.

By the above actions, claim 1 has been amended, claims 2-4 have been cancelled, and new claims 18-20 have been added. Accordingly, claims 1 and 5-20 are pending for consideration, of which claims 1 and 20 are independent. In view of these actions and the following remarks, reconsideration of this application is now requested.

Referring now to the detailed Office Action, claims 1, 2, 5, 8-12, 15 and 17 stand rejected under 35 U.S.C. §102(b) as anticipated by Ramshaw et al. (U.S. Patent No. 6,059,024 – hereafter Ramshaw). Further, claims 3 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ramshaw in view of Takabayashi et al. (U.S. Patent No. 5,262,227 – hereafter Takabayashi). Still further, claim 4 stands rejected under 35 U.S.C. §103(a) as unpatentable over Ramshaw in view of Takabayashi, and further in view of Yamada et al. (U.S. Patent No. 4,449,992 – hereafter Yamada). Still further, claim 7 stands rejected under 35 U.S.C. 103(a) as unpatentable over Ramshaw in view of Takabayashi, and further in view of Yao et al. (U.S. Patent Application No. 2003/0129379 – hereafter Yao). Finally, claims 13, 14 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ramshaw in view of Takabayashi, and further in view of Philpott et al. (U.S. Patent Application No. 2003/0213580 – hereafter Philpott). Applicants respectfully traverse these rejections for the reasons provided below.

Initially, claims 2-4 have been cancelled. Accordingly, the rejections of claims 2-4 are now rendered moot.

With respect to the §102(b) rejection, the Examiner alleges that Ramshaw discloses a polymer film heat exchange comprising all of Applicants' claimed and disclosed limitations. In response, Applicants respectfully assert that Ramshaw does not teach a sealing made by fusing a pair of thermoplastic polymer films which is defined in claim 1, which is a generic claim.

Notwithstanding the argument above, Applicants have amended claim 1 so as to more clearly differentiate the claimed invention from the teaching of Ramshaw. Specifically, amended claim 1 further recites each of the thermoplastic polymer films includes an aromatic

polyimide substrate film showing no glass transition temperature or a glass transition temperature of 304°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C fixed to the substrate film in such manner that the surface films face each other.

The above-mentioned amendment of claim 1 has supports in, e.g., original claim 3, on page 3, lines 24-27 and page 4, lines 30-32 of the specification, and in Figures 1 to 3.

Applicants respectfully assert that Ramshaw does not disclose the polymer film heat exchanger of amended claim 1. Specifically, Ramshaw fails to disclose Applicants' claimed feature wherein each of the pair of flexible thermoplastic polymer films comprises an aromatic polyimide substrate film showing no glass transition temperature or a glass transition temperature of 340°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C fixed to the substrate film in such manner that the surface films face each other.

Additionally, in the present invention, the flexible thermoplastic polymer films are fused together on an interface between the thermoplastic aromatic polyimide surface films, except in an area of a conduit pattern, as recited in, e.g, new claim 20. Ramshaw only teaches that a bilayer is suitably sealed in known manner at its periphery to contain the second fluid in suitable manner, as disclosed in col. 3, lines 35-37 of Ramshaw. Further, in the present invention, the conduit pattern has turns on a plane of the polymer films, as recited in, e.g., new claim 20.

Consequently, since each and every feature of amended claim 1 is not taught (and is not inherent) in the teachings of Ramshaw, as is required by MPEP Chapter 2131 in order to establish anticipation, the rejection of claim 1 and its dependent claims 5, 8-12, 15 and 17, under 35 U.S.C. §102(b), as anticipated by Ramshaw, is improper.

New dependent claims 18-19 and new generic claim 20 have been added to further complete the scope to which Applicants are entitled. Support for claim 18 can be found at least in, e.g., page 2, lines 27-28. Support for claim 19 can be found at least on, e.g., page 5, lines 3-5. Support for claim 20 can be found at least on, e.g., page 4, line 23 to page 5, line 2 of the present specification. The new independent claim 20 does not refer to glass transition temperatures of the substrate film and surface film, but defines the polyimide of the substrate film and the polyimide of the surface film by chemical components.

With respect to the §103(b) rejection of claims 6, 7, 13, 14, and 16, the amendment and arguments set forth above in relation to claim 1 are also applicable. That is, as Ramshaw fails to teach, disclose or suggest that each of the thermoplastic polymer film includes an aromatic polyimide substrate film showing no glass transition temperature or a glass transition temperature of 304°C or higher and a thermoplastic aromatic polyimide surface film showing a glass transition temperature in the range of 190 to 300°C fixed to the substrate film in such manner that the surface films face each other, the combination of Ramshaw and the cited secondary references is improper.

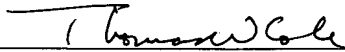
With respect to Takabayashi, the reference teaches fusion between the thermoplastic aromatic polyimide surface film and a metal film but completely fails to teach fusion between thermoplastic aromatic polyimide surface films facing each other. Hence, Takabayashi cannot cure the deficiency of Ramshaw.

In the interest of keeping prosecution history compact, and as the amendment of claim 1 is deemed sufficient to distinguish the claimed invention over the cited prior art references, Applicants will not respond to each and every §103(a) rejection. Applicants reserve the right to do so in the future, as necessary.

In view of the amendments and arguments set forth above, Applicants respectfully request reconsideration and withdrawal of all the pending rejections.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise, which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,



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